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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,830	06/08/2005	Hideaki Hirai	R2184.0432/P432	8697
24998	7590	07/11/2007		
DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER DINH, TAN X	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 07/11/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/537,830

### Applicant(s)

HIRAI, HIDEAKI

### Examiner

TAN X. DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1) Applicant's election with traverse of Group I ( *claims 1-4* ) in the reply filed on 4/30/2007 is acknowledged. The traversal is on the ground(s) that it is not serious burden to the examiner since only 12 claims in this instant application. This is not found persuasive because: As indicated in the restriction requirement, the invention do not related to a single inventive concept, the search and examination of this application would be twice or double the normal examining times which creates serious burden to the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claims 5-12 are withdrawn from further consideration.

2) This application is a 371 of PCT/JP04/02046, filed on 2/20/2004.

3) Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) or (f). The certified copy of the priority documents have been received in this National Stage Application from the International Bureau ( PCT Rule 17.2(a) ).

The foreign document identifies as:

JAPAN 2003-046417, filed on 2/24/2003.

JAPAN 2003-339564, filed on 9/30/2003.

4) The I.D.S filed 4/05/2007, 2/23/2007 and 6/08/2005 have been considered by the Examiner. However, the Japan and/or foreign document(s), if they have not been written in English, are considered to the extent that could be understood from the English Abstract and the drawings.

Form PTO-1449 or PTO/SB/08 is(are) attached herein.

5) The disclosure is objected to because of the following informalities: The specification, page 19, the phrase "FIG.15" is incorrect. It should indicate as "FIGs.15A-D".

Appropriate correction is required.

6) The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested:

OPTICAL RECORDING MEDIUM HAVING THE RELATIONSHIP BETWEEN PIT DEPTHS, WAVELENGTH AND REFRACTIVE INDEX.

7) The drawings are objected to because figures 14 and 15A-15D should be designated by a legend such as --PRIOR ART-- since only

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that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

The replacement sheet should be labeled "REPLACEMENT SHEET" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures.

If the changes are not accepted by the Examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9) Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over NAKAJIMA et al ( 7,050,383 ) and TSUKAMOTO ( European Patent Application, EP 1 197 963 A2 ).

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NAKAJIMA et al discloses a medium for optical recording, from which recorded information is reproduced by a laser beam, as claimed in claim 1, comprising:

a disk board having a recording surface ( Fig.6, the optical disc 31.);

a plurality of pits in the recording surface, wherein each of pits is comprised in a corresponding one of a plurality of cells ( Fig.1A, recorded pits 2a, 2b );

wherein depths H of pits, a wavelength  $\lambda$  of the laser beam, and a refractive index n of disc board are related as:

$\lambda/6n < H < \lambda/4n$  ( column 11, line 67, column 15, line 53 and claim 3 ), *except to specifically show that the pit-occupancy rate being the ratio of area of pit to area of cell corresponding to pit. TSUKAMOTO from the same field teaches an optical disc having plurality of cells and the pit-occupancy rate being the ratio of area of pit to area of cell corresponding to pit ( figure 5, pits 48A to 48G are different in sizes, which creates a ratio of area of pit to area of cell corresponding to pits 48A to 48G ). Since the method as taught by TSUKAMOTO is old and widely used in optical recording art, it would have been obvious to anyone within the level of artisan to use different pits sizes ( pit-occupancy rate ) in*

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NAKAJIMA et al's optical disc for recording information data as claimed.

As to claim 2, TSUKAMOTO shows pit are comprises in central positions of corresponding cells in substantially circular pattern having different radii ( Fig.5, pits 48A to 48G ).

10) Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant is reminded that in amending in response to a rejection of claims ( if the rejection involves with any applicable arts ), the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must also show how the amendments avoid such references and objections. See 37 CFR § 1.111(c).

Form PTO-892 is attached herein.

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAN XUAN DINH

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whose telephone number is (571)272-7586. The examiner can normally be reached on MONDAY to FRIDAY from 9:00AM to 5:00PM.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**TAN DINH**  
**PRIMARY EXAMINER**  
June 28, 2007